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IN THE UNITED STATES PATENT
AND TRADEMARK OFFICE

Serial No. : 09/853,298

Applicants : Nancy P. CAMACHO et al.

Filed : May 10, 2001

For : DETERMINATION OF THE
ULTRASTRUCTURE OF
CONNECTIVE TISSUE BY AN...

Art Unit : 3737

Examiner : Ruth Smith

Docket No. : 00328/RSB

Customer No.: 01933

Confirmation No.: 6040

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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Attorney: Richard S. Barth

Dated: November 24, 2003

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**REQUEST FOR INITIALED COPIES OF
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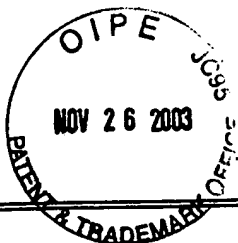
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The Examiner is respectfully requested to return copies of
(i) the Form PTO-1449 dated May 10, 2001 (a copy of which is
enclosed), (ii) Forms PTO/SB/08A and PTO/SB/08B dated August 21,
2001 (copies of which are enclosed) and (iii) Form PTO/SB/08A
dated February 12, 2002 (a copy of which is enclosed) with the
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Respectfully submitted,

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SHEET 1 of 1

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT
PTO - 1449

ATTORNEY DOCKET NO. 00328/RSB

SERIAL NO.

APPLICANT: Nancy P. CAMACHO et al.

FILED: Concomitantly Herewith

ART UNIT:

U.S. PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB	
	5,170,056	12-1992	Berard et al.			
	5,280,788	1-1994	Janes et al.			
	5,923,808	7-1999	Melling			
	5,701,913	12-1997	McPherson et al.			
	6,068,604	5-2000	Krause et al.			
	5,460,182	10-1995	Goodman et al.			
	5,769,791	6-1998	Benaron et al.			
	Re.36,044	1-1999	Benaron			
	5,762,609	6-1998	Benaron et al.			
	5,772,597	6-1998	Goldberger et al.			
	5,785,658	7-1998	Benaron et al.			
	5,807,261	9-1998	Benaron et al.			
	5,987,346	11-1999	Benaron et al.			

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB	TRANSLATION	
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OTHER DOCUMENTS (AUTHOR, TITLE, DATE, PAGES, PUBLICATION, ETC.)

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May 10, 2001

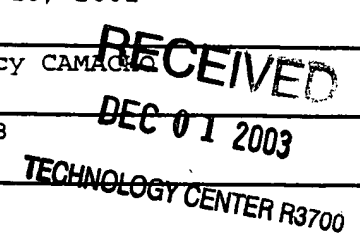
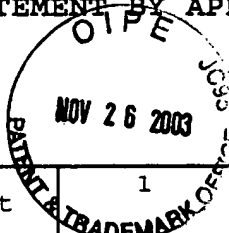
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Substitute for Form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Application Number		09/853,298			
		Filing Date		May 10, 2001			
		First Named Inventor		Nancy CAMACHO			
		Group Art Unit		2878			
		Examiner Name					
Sheet	1	of	1	Attorney Docket Number		00328/RSB	



U.S. PATENT DOCUMENTS

Exam. Inits ^a	Cite No ¹	Document Number	Kind Code ²	Name of Patentee or Applicant	Publication Date MM-DD-YYYY	Relevant Portion
		5,170,056		BERARD et al.	12-08-1992	
		5,280,788		JANES et al.	01-25-1994	
		5,923,808		MELLING	07-13-1999	
		5,701,913		McPHERSON et al.	12-30-1997	
		6,068,604		KRAUSE et al.	05-30-2000	
		5,460,182		GOODMAN et al.	10-24-1995	
		5,769,791		BENARON et al.	06-23-1998	
		5,785,658		BENARON et al.	07-28-1998	
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		5,807,261		BENARON et al.	09-15-1998	
		5,987,346		BENARON et al.	11-16-1999	
		RE. 36044		BENARON	12-12-1999	

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Exam Inits ^a	Cite No ¹	off ³	Document Number ⁴	Kind Code ⁵	Name of Patentee or Applicant	Publication Date MM-DD-YYYY	Relevant Portion	T ⁶

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¹ Unique citation designation number. See kinds of U.S. Patent Documents. Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ² For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ³ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. Place a check here if English translation is attached.

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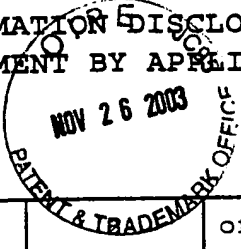
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OTHER PRIOR ART - NON-PATENT LITERATURE DOCUMENTS					
Examiner Initials ¹	Cite No. ¹	Include name of author (in CAPITAL LETTERS), title of article, title of item, date, page(s), volume-issue number(s), publisher, city and/or country where published			T ²
		<p><u>Infrared and Raman Spectroscopy of Biological Materials</u>, Eds. Gremlich, H.U., Yan, B., New York, Marcel-Dekker, pp. 323-377 (2001)</p> <p>Camacho, N.P., Hou, L., Toledano, T.R., Ilg, W.A., Brayton, C.F., Raggio, C.L., Root, L., and Boskey, A.L., "The Material Basis for Reduced Mechanical Properties in Oim Mice Bones", <u>J. Bone Miner. Res.</u>, <u>14</u>, pp. 264-272, (1999)</p> <p>Lazarev, Y.A., Grishkovsky, B.A., and Khromova, T.B., "Amide I Band of IR Spectrum and Structure of Collagen and Related Polypeptides", <u>Biopolymers</u>, <u>24</u>, pp. 1449-1478, (1985)</p> <p>Liu, K.Z., Dembinski, T.C., and Mantsch, H.H., "Rapid Determination of Fetal Lung Maturity from Infrared Spectra of Amniotic Fluid", <u>Am. J. Obstet. Gynecol.</u>, <u>178</u>, pp. 234-241, (1998)</p> <p>Mendelsohn, R., and Moore, D.J., "Vibrational Spectroscopic Studies of Lipid Domains in Biomembranes and Model Systems", <u>Chem. Phys. Lipids</u>, <u>96</u>, pp. 141-157, (1998)</p> <p>Moore, D.J., Rerek, M.E., and Mendelsohn, R., "Lipid Domains and Orthorhombic Phases in Model Stratum Corneum: Evidence from Fourier Transform Infrared Spectroscopy Studies", <u>Biochem. Biophys. Res. Commun.</u>, <u>231</u>, pp. 797-801, (1997)</p> <p>Moore, D.J., Gioioso, S., Sills, R.H., and Mendelsohn, R., "Some Relationships Between Membrane Phospholipid Domains, Conformational Order, and Cell Shape in Intact Human Erythrocytes", <u>Biochim. Biophys. Acta</u>, <u>1415</u>, pp. 342-348, (1999)</p>			
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		<p>Paschalis, E.P., Betts, F., DiCarlo, E., Mendelsohn, R., and Boskey, A.L., "FTIR Microspectroscopic Analysis of Normal Human Cortical and Trabecular Bone", <u>Calcif. Tissue Int.</u>, <u>61</u>, pp. 480-486, (1997)</p> <p>Paschalis, E.P., Betts, F., DiCarlo, E., Mendelsohn, R., and Boskey, A.L., "FTIR Microspectroscopic Analysis of Human Iliac Crest Biopsies from Untreated Osteoporotic Bone", <u>Calcif. Tissue Int.</u>, <u>61</u>, pp. 487-492, (1997)</p> <p>Camacho, N.P., Landis, W.J., and Boskey, A.L., "Mineral Changes in a Mouse Model of Osteogenesis Imperfecta Detected by Fourier Transform Infrared Microscopy", <u>Connect. Tissue Res.</u>, <u>35</u>, pp. 259-265, (1996)</p> <p>Camacho, N.P., Rimnac, C.M., Meyer, R.A.J., Doty, S., and Boskey, A.L., "Effect of Abnormal Mineralization on the Mechanical Behavior of X-Linked Hypophosphatemic Mice Femora", <u>Bone</u>, <u>17</u>, pp. 271-278, (1995)</p> <p>Gadaleta, S.J., Camacho, N.P., Mendelsohn, R., and Boskey, A.L., "Fourier Transform Infrared Microscopy of Calcified Turkey Leg Tendon", <u>Calcif. Tissue Int.</u>, <u>58</u>, pp. 17-23, (1996)</p> <p>Boskey, A.L., Guidon, P., Doty, S.B., Stiner, D., Leboy, P., and Binderman, I., "The Mechanism of Beta-Glycerophosphate Action in Mineralizing Chick Limb-Bud Mesenchymal Cell Cultures", <u>J. Bone Miner. Res.</u>, <u>11</u>, pp. 1694-1702, (1996)</p> <p>Kidder, L.H., Kalasinsky, V.F., Luke, J.L., Levin, I.W., and Lewis, E.N., "Visualization of Silicone Gel in Human Breast Tissue Using New Infrared Imaging Spectroscopy", <u>Nat. Med.</u>, <u>3</u>, pp. 235-237, (1997)</p> <p>Lewis, E.N., Kidder, L.H., Levin, I.W., Kalasinsky, V.F., Hanig, J.P., and Lester, D.S., "Applications of Fourier Transform Infrared Imaging Microscopy in Neurotoxicity", <u>Ann. N.Y. Acad. Sci.</u>, <u>820</u>, pp. 234-247, (1997)</p>		
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		First Named Inventor	Nancy CAMACHO
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Sheet 3 of 5	Attorney Docket Number	00328/RSB	

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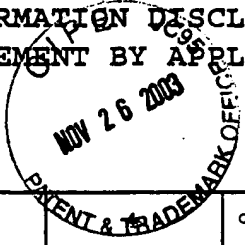
OTHER PRIOR ART - NON-PATENT LITERATURE DOCUMENTS

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		<p>Marcott, C., Reeder, R.C., Paschalis, E.P., Tatakis, D.N., Boskey, A.L., and Mendelsohn, R., "Infrared Microspectroscopic Imaging of Biomineralized Tissues Using a Mercury-Cadmium-Telluride Focal-Plane Array Detector", <u>Cell. Mol. Biol. (Noisy-le-grand)</u>, 44, pp. 109-115, (1998)</p> <p>Camacho, N.P., Mendelsohn, R., Grigiene, R., Torzilla, P.A., "Polarized FI-IR Microscopic Determination of Collagen Orientation in Articular Cartilage", 42nd Annual Meeting, Orthopaedic Research Society, February 19-22, 1996, Atlanta, Georgia</p> <p>Camacho, N.P., West, P., Torzilli, P.A., Mendelsohn, R., "FTIR Microscopic Imaging of Collagen and Proteoglycan in Bovine Cartilage", <u>Biopolymers</u>, 62:1-8 (2001)</p> <p>Potter, K., Kidder, L.H., Levin, I.W., Lewis E.N., Spencer R.G., "Imaging of Collagen and Proteoglycan in Cartilage Sections Using Fourier Transform Infrared Spectral Imaging", <u>Arthritis & Rheum</u> 44(4):846-855 (2001)</p> <p>Schumacher, H.R., Klippel, J.H., and Koopman, W.J., "Articular Cartilage", <u>Primer on the Rheumatic Diseases</u>, 11th edition, Atlanta: The Arthritis Foundation, pp. 14-18, (1993)</p> <p>Horecker, B., Kaplan, N.O., Marmur, J., and Scheraga, H.A., "Collagens", <u>Conformation in Fibrous Proteins and Related Synthetic Polypeptides</u>, New York: Academic Press, editors Fraser, R.D.B. and MacRae, T.P., pp. 344-402, (1973)</p> <p>George, A., and Veis, A., "FTIRS in H₂O Demonstrates that Collagen Monomers Undergo a Conformational Transition Prior to Thermal Self-Assembly In Vitro", <u>Biochemistry</u>, 30, pp. 2372-2377, (1991)</p>	
Examiner Signature		Date Considered	

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		<p>Lazarev, Y.A., Grishkovsky, B.A., Khromova, T.B., Lazareva, A.V., and Grechishko, V.S., "Bound Water in Collagen-Like Triple Helical Structure", <u>Biopolymers</u>, <u>32</u>, pp. 189-195, (1992)</p> <p>Bychkov, S.M., and Kuzmina, S.A., "Study of Tissue Proteoglycans by Means of Infrared Spectroscopy", <u>Biull. Eksp. Biol. Med.</u>, <u>114</u>, pp. 246-249, (1992)</p> <p>Bychkov, S.M., Bogatov, V.N., and Kuzmina, S.A., "Infrared Spectra of Cartilage Proteoglycans", <u>Bull. Eksp. Biol. Med.</u>, <u>90</u>, pp. 561-563, (1980)</p> <p>Bychkov, S.M., Bogatov, V.N., and Kuzmina, S.A., "Study of Different Proteoglycan Salts", <u>Bull. Eksp. Biol. Med.</u>, <u>92</u>, pp. 302-305, (1981)</p> <p>Buckwalter, J.A., and Mow, V.C., "Injuries to Cartilage and Meniscus: Sports Injuries to Articular Cartilage", DeLee, J.C., and Drez, D., Jr., <u>Orthopaedic-Sports Medicine Principles and Practice</u>, Philadelphia: W.B. Saunders Company, pp. 82-107, (1994)</p> <p>Potter, H.G., Linklater, J.M., Allen, A.A., Hannafin, J.A., and Haas, S.B., "Magnetic Resonance Imaging of Articular Cartilage in the Knee: An Evaluation With Use of Fast-Spin-Echo Imaging", <u>J. Bone Joint, Surg. Am.</u>, <u>80</u>, pp. 1276-1284, (1998)</p> <p>Recht, M.P., and Resnick, D., "Magnetic Resonance Imaging of Articular Cartilage: An Overview" <u>Top. Magn. Reson. Imaging</u>, <u>9</u>, pp. 328-336, (1998)</p> <p>Speer, D.P., and Dahners, L., "The Collagenous Architecture of Articular Cartilage, Correlation of Scanning Electron Microscopy and Polarized Light Microscopy Observations", <u>Clin. Orthop.</u>, <u>167</u>, pp. 267-275, (1979)</p>	
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		<p>Panula, H.E., Hyttinen, M.M., Arokoski, J.P., Langsjo, T.K., Pelettari, A., Kiviranta, I., and Helminen, H.J., "Articular Cartilage Superficial Zone Collagen Birefringence Reduced and Cartilage Thickness Increased before Surface Fibrillation in Experimental Osteoarthritis", <u>Ann. Rheum. Dis.</u>, <u>57</u>, pp. 237-245, (1998)</p> <p>Gadaleta, S.J., Landis, W.J., Boskey, A.L., and Mendelsohn, R., "Polarized FT-IR Microscopy of Calcified Turkey Leg Tendon", <u>Connect. Tissue Res.</u>, <u>34</u>, pp. 203-211, (1996)</p> <p>Pachalis, E.P., F. Betts, E. DiCarlo, J.M. Lane, R. Mendelsohn, and A.L. Boskey, "Mineral and Organic Matrix Changes in Osteoporosis", <u>J. Dent. Res.</u>, <u>76</u>, p. 287 (1997)</p> <p>M. Khan, M. Yamauchi, S. Srisawasdi, D. Stiner, S. Doty, E.P. Paschalis, A.L. Boskey, "Homocysteine Decreases Chondrocyte-Mediated Matrix Mineralization in Differentiating Chick Limb-bud Mesenchymal Cell Micro-Mass Cultures", <u>Bone</u>, <u>28</u>, 387-398 (2001)</p> <p>Hollander, A.P., T.F. Heathfield, C. Webber, Y. Iwata, R. Bourne, C. Rorabeck, and A.R. Poole, (1994), "Increased Damage to Type II Collagen in Osteoarthritic Articular Cartilage Detected by a New Immunoassay", <u>Journal of Clinical Investigation</u>, <u>93</u>, pp. 1722-1732</p> <p>Griffiths, P.R., and J.A. de Haseth, (1986), "Fourier Transform Infrared Spectrometry", <u>Wiley-Interscience</u>, New York, <u>457</u>, pp. 188-193</p>			
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		3,769,963		Goldman et al.	11-06-1973	
		4,336,809		Clark	06-29-1982	
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		5,346,488	A	Prince et al.	09-13-1994	
		5,746,736	A	Tankovich	05-05-1998	
		5,876,397	A	Edelman et al.	03-02-1999	
		6,135,774	A	Hack et al.	10-24-2000	
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